

REMARKS

The Office Action mailed September 1, 2005, has been reviewed and carefully considered. Claims 1-17 are pending.

In paragraph 2 on page 2 of the Office Action, claims 1-8 and 13-17 were rejected under 35 U.S.C. § 102(e) as being anticipated by Pinarbasi. In paragraph 4 on page 3 of the Office Action, claims 9-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pinarbasi in view of Gill.

In paragraph 6 on page 5 of the Office Action, claims 1-8 and 13-17 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ohsawa et al. In paragraph 8 on page 5 of the Office Action, claims 9-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa et al. In paragraph 9 on page 6 of the Office Action, claims 13-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohsawa et al.

Applicant respectfully traverses the rejections. Applicant respectfully submits that the cited references fail to disclose, teach or suggest Applicant's invention as recited in the claims. More specifically, the cited references fail to suggest the ratio of the first thickness and second thickness is selected to provide a desired magnetostriction as recited in independent claims 1, 5, 9, 11, 13, 15 and 17.

Rather, Pinarbasi merely describes a method for forming a pinned layer structure of a spin valve sensor by sputter deposition of cobalt iron in a nitrogen atmosphere so that the copper spacer layer achieves a desirable ferromagnetic coupling field between the pinned layer structure and a free layer structure in the spin valve sensor. Pinarbasi describes spin valve heads formed by the method wherein a free layer structure is used. After the spin valve sensor is formed, the

thickness of the free layer structure is measured and a first layer is measured to have a first thickness and a second free layer is measured to have a second thickness.

However, Pinarbasi never mentions nay desire for a a free layer structure to have a particular magnetostriction. Moreover, Pinarbasi fails to disclose, teach or suggest that the magnetostriction is a factor that needs to be selected. Pinarbasi fails to disclose, teach or suggest that the magnetostriction can even be selected by selecting a ratio for the thickness of the first and seocnd free layer. Pinarbasi is simply not concerned with the setting of the magnetostriction of the free layer structure.

Because Pinarbasi does not teach, disclose or suggest selecting a ration for the thickness of a first free layer and a thickness of a second free layer to provide a desired magnetostriction, Applicant's invention is patentable over Pinarbasi.

Gill fails to overcome the deficiencies of Pinarbasi. Gill is merely cited for teaching a magnetoresistance detector. Gill does not teach, disclose or suggest selecting a ration for the thickness of a first free layer and a thickness of a second free layer to provide a desired magnetostriction.

Therefore, Gill and Pinarbasi, alone or in combination, fail to teach, disclose or suggest selecting a ration for the thickness of a first free layer and a thickness of a second free layer to provide a desired magnetostriction.

Ohsawa et al. fail to overcome the deficiencies of Pinarbasi and Gill. Ohsawa et al. does not even mention magnetostriction. Ohsawa et al. disclose a free layer structure that includes a first and a second free layer. However, Ohsawa et al. fail to suggest selecting the thicknesses of the free layers. Thus, Ohsawa et al., Gill and Pinarbasi, alone or in combination, fail to teach,

disclose or suggest selecting a ration for the thickness of a first free layer and a thickness of a second free layer to provide a desired magnetostriction.

Accordingly, Applicants respectfully submit that independent claims 1, 5, 9, 11, 13, 15 and 17 are patentable over Ohsawa et al., Gill and Pinarbasi.

Dependent claims 2-4, 6-8, 10, 12, 14 and 16 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 1, 5, 9, 11, 13 and 15 respectively. Further dependent claims 2-4, 6-8, 10, 12, 14 and 16 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-4, 6-8, 10, 12, 14 and 16 are patentable over the cited references.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 423-757-0264.

Respectfully submitted,

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